REMARKS

Claims 1, 4-17, 19, 21-25, 27-29, 31-40, 42, 44-48, 50-56, 58, 60, 62-68, and 70 are pending in the application.

Claims 1, 4-17, 19-29, 31-40, 42-48, 50-56, 58-60, 62-68, and 70-71 have been rejected.

Claims 20, 26, 43, 59, and 71 have been canceled.

Claims 6, 14, 15, 19, 22, 39, 55, and 67 have been amended. No new matter has been added. Support for the amendment to claims 14, 39, 55, and 67 can be found, at least, in paragraph 66 of the specification.

Informalities

Claim 19 is objected to as lacking proper antecedent basis. The Applicants have made appropriate corrections and accordingly submit that this objection has been overcome.

Rejection of Claims under 35 U.S.C. §102(b)

Claims 14-19, 21, 39-40, 42, 44-46, and 55-58 stand rejected under 35 U.S.C. §102(b) as being anticipated by Chuah (USPN 6,487,689) ("Chuah"). The Applicants respectfully traverse this rejection.

With respect to amended claim 14, the cited art fails to teach or suggest a control unit configured to de-encapsulate a packet and send the de-encapsulated packet to a loopback port in response to removing the packet from a queue, where the control unit is also configured to forward the de-encapsulated packet in response to the de-encapsulated packet being received by the loopback port. In particular, the cited sections of Bannister relied upon to teach recirculating (Final Office Action, p. 20) fail to teach or suggest de-encapsulating a packet and handling a de-encapsulated packet in the manner described in claim 14. Claims 15-19, 21, 39-40, 42, 44-46, and 55-58 are also patentable over the cited art for at least this reason.

Rejection of Claims under 35 U.S.C. §103(a)

Claims 1, 4-5, 8-10, 13, 22-25, 27-29, 32-33, 36-38, 48-49, 51-52, 60, and 64 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Liu et al. (USPPN

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2002/0146016) ("Liu") in view of the allegedly admitted prior art in paragraph 2 of the present specification ("APA").

With respect to claim 1, the cited art fails to teach or suggest that "the queue indicates how many packets <u>in each of the flows</u> are outstanding within the network tunnel." The rejection relies upon Liu to teach the queue and on APA to teach aggregating multiple flows. Final Office Action, pages 3-4. However, neither reference, alone or in combination, teaches or suggests a queue that indicates how many packets <u>in each of several flows</u> are outstanding within a tunnel. Instead, the references merely note that flows can be aggregated in a tunnel and that packets can be stored in an outbound packet queue. Nothing in either reference teaches or suggests that Liu's outbound packet queue indicates (or should be modified to indicate) how many packets in each of several flows are outstanding within a tunnel. APA also fails to teach or suggest this feature.

For at least the foregoing reason, claim 1 is patentable over the cited art. Claims 4-5, 8-10, 13, 29, 32-33, 36-38, 48-49, 51-52, 60, and 64 are patentable over the cited art for similar reasons.

With respect to amended claim 22, the cited art fails to teach or suggest the packet drop algorithm differentiates between different packet flows being aggregated for transmission via the network tunnel. This feature is neither taught nor suggested by Liu or APA. Brewer, which was relied upon to teach similar features of now-canceled claim 26 (Final Office Action, p. 18), also fails to teach or suggest this feature.

In the rejection of claim 26, the Final Office Action cited Brewer's Abstract as teaching "the drop algorithm differentiates between different packet flows being aggregated for transmission via the link." Brewer's Abstract recites:

> In a multi-QOS level queuing structure, packet payload pointers are stored in multiple queues and packet payloads in a common memory pool. Algorithms control the drop probability of packets entering the queuing structure. Instantaneous drop probabilities are obtained by comparing measured instantaneous queue size with calculated minimum and maximum queue sizes. Non-utilized common memory space is allocated simultaneously to all queues. Time averaged drop probabilities follow a traditional Weighted Random Early Discard mechanism. Algorithms are adapted to a multi-level QOS structure, floating point format, and hardware implementation. Packet flow from a router egress queuing structure into a single egress port tributary is controlled by an arbitration algorithm using a rate metering mechanism. The queuing structure is replicated for each egress tributary in the router system.

The Abstract of Brewer, quoted above, neither teaches nor suggests multiple different flows aggregated for transmission via a link, nor does it suggest differentiating between such different flows when applying a packet drop algorithm. At best, Brewer's Abstract merely uses the word "flow" and discusses algorithms used to control the drop probability of packets. This clearly neither teaches the specific features of claim 22. Claims 22-25 and 27 are patentable over the cited art for at least the foregoing reasons.

Claims 67-68 and 70 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Chuah. Claim 6-7 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Liu in view of APA as applied to claim 1 and further in view of Le Gouriellec et al. (USPPN 2003/0112756) ("Le Gouriellec"). Claims 11 and 12 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Liu in view of APA as applied to claim 1 and further in view of Bishard (USPPN 2003/0165148) ("Bishard"). Claims 26, 34, 35, 53, 54, 65, and 66 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Liu in view of Brewer et al. (USPPN 2006/0062233) ("Brewer"). Claims 47 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Chuah in view of Brewer. Claims 20, 31, 43, 50, 59, 62, 63, and 71 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Chuah in view of Bannister (USPN 6,145,032) ("Bannister"). The Applicants respectfully request the withdrawal of these rejections for at least the reasons set forth above.

Further with respect to claim 6, the Applicants note that the cited art fails to teach or suggest a control unit configured to select whether the particular packet is admitted to the network tunnel based on which flow comprises the particular packet. In the cited sections of Le Gouriellec relied upon in the rejection of claim 6, packets are selectively discarded based upon the flow profile to which those packets conform. However, both the first and second flow profiles described in paragraph 8 of Le Gouriellec are associated with the same flow: "the packet conforms to the first traffic flow profile if the packet is transmitted within a committed bandwidth subscription for the flow, and conforms to the second traffic profile if the packet is transmitted outside the committed bandwidth subscription for the flow." Accordingly, packets are discarded based upon whether the packets conform to one of several flow profiles (each of which is associated with the same flow), not based upon whether the packets are included in a particular one of

several flows. None of the other cited art is relied upon to teach or suggest this feature. Accordingly, the withdrawal of this rejection is requested.

Further with respect to claim 7, the cited art fails to teach or suggest a control unit configured to drop the particular packet if the flow currently has a threshold number of packets stored in the queue. In particular, paragraph 39 of Le Gouriellec merely describes that the queuing mechanism determines the fullness of the non-congestion area of the oversubscribed queue. Nothing in the cited portion of Le Gouriellec teaches or suggests that the fullness of the non-congestion area of the oversubscribed queue teaches or suggests anything about whether a <u>particular flow</u> currently has a threshold number of packets in the queue. Instead, the fullness of the non-congestion area, which does not appear to indicate the number of outstanding packets in a particular flow, appears to be merely used to determine congestion status, which in turned causes marked packets to be dropped and unmarked packets to be stored in the congestion area of the queue. None of the other cited art is relied upon to teach this feature, and thus the withdrawal of this rejection is also requested.

CONCLUSION

In view of the amendments and remarks set forth herein, the application and the claims therein are believed to be in condition for allowance without any further examination and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephone interview, the Examiner is invited to telephone the undersigned at 512-439-5087.

The Applicants hereby petition for a two-month extension of time under 37 C.F.R. § 1.136(a). If any additional extensions of time under 37 C.F.R. § 1.136(a) are required in order for this submission to be considered timely, the Applicants hereby petition for such extensions. The Applicants also hereby authorizes that any fees due for such extensions or any other fee associated with this submission, as specified in 37 C.F.R. § 1.16 or § 1.17, be charged to deposit account 502306.

Respectfully submitted,

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